

Reply to Office Action of August 1, 2008

### **Remarks**

Claims 1-13 and 16-19 are pending in this application. Claims 1 and 16 have been amended to more particularly point out the invention. Claims 6 and 11 have been amended to correct minor typographical errors.

Claim 16 was objected to because of an informality. Claim 16 has been corrected by amendment.

Claims 1-13 and 16-19 were rejected under 35 U.S.C. § 112, first paragraph. Claims 1 and 16 have been amended to delete the term "unconditionally" from the claims. In addition, Applicants note the Examiner's distinction between claims 1 and 16. Claim 1 has been corrected to clarify avoiding a trap by performing, which is consistent with the language of claim 16. Accordingly, the amendments to the claims are believed to overcome the rejections under 35 U.S.C. § 112, first paragraph.

Claims 1-13 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Lin* (U.S. Patent No. 6,631,452).

Amended claim 1 clarifies the manipulation of storage to avoid a trap by performing, in response to the determination, at least one of a register window spill operation or a register window fill operation responsive to the condition that is detected as imminent. *Lin* does not teach this subject matter. To the extent that *Lin* may avoid a trap by performing certain actions, *Lin* extensively describes speculative transfers, speculative saves and restores (spills and fills) of data, to manipulate the register file. In contrast to speculative data transfers, claim 1 recites avoiding a trap by performing, in response to the determination (as opposed to speculatively). This determination is clarified in the claim as being detecting by determining if execution of any cached instructions that are next slated for insertion into an execution pipeline will result in a register window overflow condition or a register window underflow condition.

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Because the data transfers in *Lin* are speculative, there is no teaching of the claimed subject matter.

Further, Applicants direct the Examiner's attention to the fact that the amended claim clarifies that the determination is based on cached instructions that are next slated for insertion into an execution pipeline. In the Detailed Action, the Examiner had made statements regarding the point at which the instructions were monitored. The amended claims clarify the point at which the instructions are monitored. The monitoring as claimed, in combination with the other claim limitations, are not suggested by *Lin*.

For reasons given above, claim 1 is believed to be patentable over *Lin*. Claims 2-13 are dependent claims and are also believed to be patentable over *Lin*. Claims 16-19, although not rejected based on *Lin*, are also believed to be patentable. Note that amended claim 16 also clarifies the point of monitoring.

The Examiner had also rejected claims 1-2, 6, 8, and 11-13 under 35 U.S.C. § 102(b) as being anticipated by *Eickemeyer* et al. (U.S. Patent No. 5,377,336). These claims are believed to be patentable over *Eickemeyer*.

*Eickemeyer* does describe pre-fetching load instruction data. Note that amended claim 1 clarifies avoiding a trap by performing, in response to the determination, at least one of a register window spill operation or register window fill operation responsive to the condition that is detected as imminent. Further, the amended claim clarifies that the detecting is performed by determining if execution of any cached instructions that are next slated for insertion into an execution pipeline will result in a register window overflow condition or a register window underflow condition. With regard to *Eickemeyer*, there appears to be no teaching of determining if execution of any cached instructions that are next slated for insertion into an execution pipeline will result in a register window overflow or a register window underflow condition as claimed. *Eickemeyer* does describe pre-fetching load instruction data, but does not appear to be making the claimed determination. As well, the amended claim recites avoiding a trap by performing,

in response to the determination, spill or fill operations. Previous claim 1 was worded differently, as acknowledged by the Examiner, and the amended claim recites subject matter not described in *Eickemeyer*.

For reasons given above, claim 1 is believed to be patentable. Claims 2-13 are dependent claims and are also believed to be patentable. Claims 16-19 were not rejected based on *Eickemeyer*, and are also believed to be patentable.

For reasons given above, claims 1-13 and 16-19 are believed to be in condition for allowance and such action is respectfully requested.

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Respectfully submitted,  
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